

Superfícies Com Curvatura Gaussiana Constante em Espaços Conformemente Planos

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Abstract. Neste trabalho caracterizamos as superfícies de curvatura Gaussiana constante em espaços conformemente planos (\mathbb{R}^3, \hat{g}) onde $\hat{g} = \frac{\delta_{ij}}{F^2}$ e $F : \mathbb{R} \rightarrow \mathbb{R}$ é uma função radial $F(r) = F(x_1^2 + x_2^2 + x_3^2)$, consideramos $F(r) = \sqrt{r}$ e $F(r) = e^{-r^2}$ e construímos exemplos de superfícies completas com curvatura gaussiana zero em (\mathbb{R}^3, \hat{g})

References

- [1] M.A Souza A.V. Corro, R.S Pina. Classes of weingarten surfaces in $\mathbb{S}^2 \times \mathbb{R}$ (2016). arXiv:1606.08479 [math.DG]
- [2] M.A Souza A.V. Corro, R.S Pina. Surfaces of rotation with constant extrinsic curvature in a conformally flat 3-space. *Results in Mathematics*, 60:225–234, 2011.
- [3] Jose A. Galvez Juan A. Aledo, Jose M. Espinar. Complete surfaces of constant curvature in $\mathbb{S}^2 \times \mathbb{S}$ and $\mathbb{H}^2 \times \mathbb{R}$. *Calc Var*, 29:347–363, 2007.
- [4] A.V Corro; A. Martinez and F.Milán, Complete flat surfaces with two isolated singularities in hyperbolic 3-space. *Journal of Math. Analysis and Applications*, 366 (2010), 582-592.
- [5] Araújo, Kellcio Oliveira; Cui, Ningwei; Pina, Romildo da Silva, Helicoidal minimal surfaces in a conformally flat 3-space. *Bull. Korean Math. Soc* 53 (2016), no2, 531-540.
- [6] J.M. Espinar; J.A Gálvez and H. Rosenberg, Complete surfaces with positive extrinsic curvature in product spaces, *Comm. Math. Helv.*, 84 (2009), no 2, 351-386.
- [7] *Manfredo Do Carmo, Geometria Riemanniana*, (5ed 2015)